

Kimball C. Atwood 3d Dies at 71; Developed Way to Analyze Genes

By WOLFGANG SAXON

Dr. Kimball Chase Atwood 3d, a geneticist who helped develop a technique for the detection and analysis of individual genes in a chromosome, died on Oct. 13 at his home in Woods Hole, Mass. He was 71 years old.

The cause was pancreatic cancer, said the Columbia University College of Physicians and Surgeons. He had retired from there as a professor of human genetics and development. The university reported his death this week.

A native of New York City, Dr. Atwood graduated from Columbia College in 1942 and received his M.D. from New York University College of Medicine. In 1948, at Columbia University, he was associated with Dr. Francis J. Ryan of the zoology department in his research with bacteria that buttressed Darwin's theory of evolution with laboratory evidence.

From 1950 to 1958, Dr. Atwood was senior biologist at the Oak Ridge National Laboratory in Tennessee, studying the effects of radiation on genetic material during atomic bomb tests at Yucca Flats, Nev. He then worked at the University of Chicago and the University of Illinois-Urbana, where he became head of the department of microbiology.

Together with two colleagues, Dr. Ferruccio Ritossa and Dr. Sol Spiegelman, he worked at Urbana to develop a technique known as molecular hybridi-

zation. "This procedure allows for the detection and analysis of specific genes in the chromosome," said Dr. Richard Axel, professor of pathology at Columbia.

"Molecular hybridization was essential for the development of recombinant DNA technology, which has ultimately led to the identification of a host of human genes responsible for genetic disorders," Dr. Axel said. "Dr. Atwood's work also provided the basis for studies in molecular evolution, which allowed a close look at how the chromosomes of the individual species evolve from one another."

Like Dr. Spiegelman, Dr. Atwood returned to Columbia in 1969. He retired from his professorship to Woods Hole in 1987. He did research and lectured at the Marine Biological Laboratory there almost every summer since 1949 and continued to do so in retirement.

Dr. Atwood is survived by his wife of 47 years, the former Barbara Frances Drew; two daughters, Barbara J. Atwood-Fukuda of Riverdale, the Bronx, and Jane Evelyn Atwood of Paris; two sons, Kimball 4th, of Newton Centre, Mass., and Nathaniel B., of Anchorage, Alaska; three brothers, John, of West Redding, Conn., Charles, of Bradenton, Fla., and Frederick, of Islip, L.I.; and two grandsons.